

MATERIAL SAFETY DATA SHEET

MSDS DATE:08/13/07

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: LUGOL'S IODINE
SYNONYMS: IODIC ACID, POTASSIUM SALT. IODINE CRYSTALS; IODINE SUBLIMED
PRODUCT CODES: 26055-05
MANUFACTURER: ELECTRON MICROSCOPY SCIENCES
DIVISION: 1560 INDUSTRY ROAD/P.O. BOX 550
ADDRESS: HATFIELD, PA 19440

EMERGENCY PHONE: 215-412-8400
CHEMTREC PHONE: 800-424-4300

FAX PHONE: 215-412-8450

CHEMICAL NAME: N/A
CHEMICAL FAMILY: N/A

SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENT:
POTASSIUM IODIDE
IODINE

<u>CAS NO.</u>	<u>% WT</u>	<u>% VOL</u>	<u>SARA 313 REPORTABLE</u>
7681-11-0	2	N/A	
7553-56-2	1	N/A	
	<u>ppm</u>	<u>mg/m3</u>	
OSHA PEL-TWA:	0.1	N/A	
OSHA PEL STEL :	N/A	N/A	
OSHA PEL CEILING:	0.1	N/A	
ACGIH TLV-TWA:	0.1	N/A	
ACGIH TLV STEL:	N/A	N/A	
ACGIH TLV CEILING:	0.1	N/A	

SECTION 3: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: WARNING! POISON! HARMFUL IF INHALED OR ABSORBED THROUGH SKIN! CAUSES IRRITATION!

ROUTES OF ENTRY: INHALATION, SKIN, INGESTION

POTENTIAL HEALTH EFFECTS

EYES: VAPORS SEVERELY IRRITATE EYES. CAUSE TEARING AND INFLAMMATION OF THE EYELIDS.

SKIN: THE CRYSTALLINE FORM OR STRONG SOLUTIONS ARE SEVERE SKIN IRRITANTS. LESIONS RESEMBLE THERMAL BURNS

INGESTION: MAY CAUSE BURNING SENSATIONS, SEVERE CORROSIVE GASTROENTERITIS, ABDOMINAL PAIN, DIARRHEA, FEVER, VOMITING, STUPOR AND SHOCK. PROBABLE LETHAL DOSE IS 2 TO 4 GM OF FREE IODINE

INHALATION: HIGHLY IRRITANT TO THE MUCOUS MEMBRANES AND RESPIRATORY TRACT. EXCESSIVE TEARS, RHINIUS, TIGHTNESS IN CHEST, SORE THROAT, HEADACHE AND DELAYED PULMONARY EDEMA CA RESULT.

ACUTE HEALTH HAZARDS: WARNING! POISON! HARMFUL IF SWALLOWED, INHALED OR ABSORBED THROUGH SKIN! CAUSES IRRITATION, EXCESSIVE TEARS, RHINITIS, TIGHTNESS IN CHEST, SORE THROAT, HEADACHE.

CHRONIC HEALTH HAZARDS: MAY CAUSE INSOMNIA, CONJUNCTIVITIS, INFLAMMATION OF THE NASAL MUCOUS, BRONCHITIS, TREMOR, RAPID HEART BEAT, DIARRHEA AND WEIGHT LOSS. ALLERGIC SENSITIZATION CAN OCCUR

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: PERSON WITH PRE-EXISTING SKIN DISORDRS, EYE PROBLEMS, IMPAIRED RESPIRATORY FUNCTION, DISEASE OF THE THYROID, LUNGS OR KIDNEY MAY BE MORE SUSCEPTIBLE TO THE EFFECTS OF THE SUBSTANCE.

CARCINOGENICITY

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OSHA: N/A ACGIH: N/A NTP:N/A IARC: N/A
OTHER: N/A

SECTION 4: FIRST AID MEASURES

EYES: FLUSH WITH WATER FOR 15 MINUTES LIFTING THE LOWER AND UPPER EYELIDS OCCASIONALLY. IF IRRITATION OCCURS, SEEK MEDICAL ATTENTION

SKIN: WASH WITH SOAP AND WATER FOR 15 MINUTES. REMOVE AFFECTED CLOTHING, SEEK MEDICAL ATTENTION.

INGESTION: GIVE WATER OR MILK TO DRINK. INDUCE VOMITING IF MEDICAL HELP IS NOT IMMEDIATELY AVAILABLE. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. GET MEDICAL ATTENTION IMMEDIATELY.

INHALATION: IF INHALED REMOVE TO FRESH AIR. IF NOT BREATHING GIVE ARTIFICIAL RESPIRATION. SEEK MEDICAL ATTENTION.

NOTES TO PHYSICIANS OR FIRST AID PROVIDERS: N/A

SECTION 5: FIRE-FIGHTING MEASURES

FLAMMABLE LIMITS IN AIR, UPPER: N/A
(% BY VOLUME) **LOWER:** N/A

FLASH POINT: N/A

F: N/A

C: N/A

METHOD USED: N/A

AUTOIGNITION TEMPERATURE: N/A

F: N/A

C: N/A

NFPA HAZARD CLASSIFICATION

HEALTH: N/A

FLAMMABILITY: N/A

REACTIVITY: N/A

OTHER: N/A

HMIS HAZARD CLASSIFICATION

HEALTH: N/A

FLAMMABILITY: N/A

REACTIVITY: N/A

PROTECTION: N/A

EXTINGUISHING MEDIA: USE EXTINGUISHING MEDIA APPROPRIATE FOR SURROUNDING FIRE.

SPECIAL FIRE FIGHTING PROCEDURES: FIREFIGHTERS SHOULD WEAR PROPER PROTECTIVE EQUIPMENT AND SELF CONTAINED BREATHING APPARATUS WITH FULL FACE PIECE OPERATED IN POSITIVE PRESSURE MODE.

UNUSUAL FIRE AND EXPLOSION HAZARDS: TOXIC GASES PRODUCED: IODINE
CONTACT WITH OXIDIZING AGENTS MAY CAUSE EXTREMELY VIOLENT COMBUSTION.

HAZARDOUS DECOMPOSITION PRODUCTS: N/A

SECTION 6: ACCIDENTAL RELEASE MEASURES

ACCIDENTAL RELEASE MEASURES: WEAR SUITABLE PROTECTIVE GEAR, ABSORB SPILL ON SAND, EARTH OR VERMICULITE AND CONTAINERIZE FOR PROPER DISPOSAL. WASH SPILL AREA WITH WATER.

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SECTION 7: HANDLING AND STORAGE

HANDLING AND STORAGE: KEEP CONTAINER CLOSED WHEN NOT IN USE. WASH THOROUGHLY AFTER HANDLING. AVOID ALL ROUTES OF EXPOSURE. AVOID BREATHING VAPORS.

OTHER PRECAUTIONS: N/A

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS:

VENTILATION: FUME HOOD

RESPIRATORY PROTECTION: NIOSH APPROVED FULL FACE PIECE RESPIRATORY EQUIPMENT TO AVOID IODINE VAPORS ABOVE 0.01

EYE PROTECTION: FACE SHIELD/ SAFETY GOGGLES

SKIN PROTECTION: RUBBER GLOVES

OTHER PROTECTIVE CLOTHING OR EQUIPMENT: APPROVED WORK CLOTHES, EYEWASH AND SAFETY SHOWER. USE CARE WHEN HANDLING. AVOID ALL ROUTES OF EXPOSURE.

WORK HYGIENIC PRACTICES: N/A

EXPOSURE GUIDELINES: N/A

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: REDDISH BROWN SOLUTION

ODOR: ODOR OF IODINE

PHYSICAL STATE: LIQUID (SOLUTION)

pH AS SUPPLIED: N/A

pH (Other): N/A

BOILING POINT:

F: N/A

C: 101 DEG

MELTING POINT: N/A

F: N/A

C: N/A

FREEZING POINT: N/A

F: N/A

C: N/A

VAPOR PRESSURE (mmHg): 18

@

F: N/A

C: 20 DEG

VAPOR DENSITY (AIR = 1): 0.6

@

F: N/A

C: N/A

@

F: N/A

C: N/A

EVAPORATION RATE:

BASIS (=1): 1

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES (con't)

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SOLUBILITY IN WATER: APPRECIABLE/ COMPLETE

PERCENT SOLIDS BY WEIGHT: MORE THAN 10%

PERCENT VOLATILE: N/A
BY WT/ BY VOL @
F: N/A
C: N/A

VOLATILE ORGANIC COMPOUNDS (VOC): N/A

WITH WATER: N/A LBS/GAL
WITHOUT WATER: N/A LBS/GAL

MOLECULAR WEIGHT: N/A
VISCOSITY: N/A

@
F: N/A
C: N/A

SECTION 10: STABILITY AND REACTIVITY

STABILITY: STABLE

CONDITIONS TO AVOID (STABILITY): EXCESS HEAT REACTS WITH NH₄OH TO FORM SHOCK SENSITIVE IODINES, STRONG REDUCING AGENTS, AMMONIA, POWDERED METALS, ALKALI METALS.

INCOMPATIBILITY (MATERIAL TO AVOID): N/A

HAZARDOUS DECOMPOSITION OR BY-PRODUCTS: IODINE

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR

CONDITIONS TO AVOID (POLYMERIZATION): N/A

SECTION 11: TOXICOLOGICAL INFORMATION

TOXICOLOGICAL INFORMATION: TOXICITY: ORAL-RAT LD50: 14 GM/KG

SECTION 12: ECOLOGICAL INFORMATION

ECOLOGICAL INFORMATION: N/A

SECTION 13: DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD: COMPLY WITH FEDERAL, STATE, LOCAL REGULATIONS.

RCRA HAZARD CLASS: N/A

SECTION 13: DISPOSAL CONSIDERATIONS (con't)

SECTION 14: TRANSPORT INFORMATION

U.S. DEPARTMENT OF TRANSPORTATION

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PROPER SHIPPING NAME: N/A
HAZARD CLASS:
ID NUMBER:
PACKING GROUP:
LABEL STATEMENT:

WATER TRANSPORTATION

PROPER SHIPPING NAME: N/A
HAZARD CLASS:
ID NUMBER:
PACKING GROUP:
LABEL STATEMENTS:

AIR TRANSPORTATION

PROPER SHIPPING NAME: N/A
HAZARD CLASS:
ID NUMBER:
PACKING GROUP:
LABEL STATEMENTS:

OTHER AGENCIES: N/A

SECTION 15: REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS

TSCA (TOXIC SUBSTANCE CONTROL ACT): N/A

CERCLA (COMPREHENSIVE RESPONSE COMPENSATION, AND LIABILITY ACT): N/A

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT): N/A

311/312 HAZARD CATEGORIES: N/A
313 REPORTABLE INGREDIENTS: N/A

STATE REGULATIONS: N/A

INTERNATIONAL REGULATIONS: N/A

SECTION 16: OTHER INFORMATION

OTHER INFORMATION: N/A

PREPARATION INFORMATION: N/A

DISCLAIMER: IN COMPLIANCE WITH THE OSHA HAZARD COMMUNICATION STANDARD, 2.9 C.F.R 1910. 1200, WE ARE PROVIDING YOU WITH A MSDS FOR THE HAZARDOUS MATERIAL YOU ARE PURCHASING.

IT IS YOUR RESPONSIBILITY TO EDUCATE YOUR EMPLOYEES ON THE SAFE USE OF THE HAZARDOUS MATERIAL.

ELECTRON MICROSCOPY SCIENCES MAKES NO PRESENTATION AS TO THE ACCURACY OF THE INFORMATION IN THE MSDS. THE INFORMATION IS BELIEVED TO BE CORRECT; HOWEVER, YOU (THE CUSTOMER), SHOULD PERFORM YOUR OWN INVESTIGATION AND INDEPENDENT VERIFICATION. IF YOU RESELL THE PRODUCT, YOU ARE RESPONSIBLE TO FORWARD THE INFORMATION IN THE MSDS TO YOUR CUSTOMER.